# National Call for Safe Technology

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## Congressional Briefing: Wireless Infrastructure Policy

Americans are being exposed to the hazards of wireless technology, which are unnecessary to reap its benefits. We advocate for responsible policy.

**Hazards of current and proposed policies on wireless deployment:**

1. **Regulatory gap: lack of oversight** no US government agency is protecting Americans from exposure to wireless radiation
   - 1996: FCC issues exposure guidelines,[1] while ignoring input from EPA[2]
   - 2012: GAO report recommends FCC review its 1996 exposure limits[3]
   - 2013-19: FCC opens docket and receives 11,000 pages of scientific studies of harm[4]
   - 2019: FCC closes the docket and decides not to update its wireless limits[5]
   - 2021: US Court of Appeals DC Circuit rules that FCC's decision not to update exposure limits was "arbitrary and capricious";[6] FCC has not yet complied with the court order to address long-term exposure effects, including on children
   - FCC responsible for exposure guidelines despite having no health or safety competency.
     - There is no independent safety body, like NTSB for transportation
2. **Evidence of biological harm is clear and convincing**, for human health (cancer and noncancer), children, plants, animals, insects, and microbes[7]
3. **Ignores millions of Americans disabled by wireless radiation[8]**
4. **Subverts the free market** by imposing federal government mandates that override the free market and force experimental technology on Americans[9]
5. **Shields industry from liability** rather than encouraging industry to compete on safety[10]
6. **Tramples states' rights and local government on cell tower zoning and placement**
   6.1. Tenth amendment issues: preempts states from regulating cell towers on the basis of radiofrequency emissions, while the federal government is not doing so.[11]
   6.2. Fifth Amendment takings issues: federal preemption is a regulatory and physical taking of private property and public property in rights-of-way, and drops property values without compensation[12,13]
   6.3. Commerce clause overreach: while one can choose to abstain from a regulated activity,[14] federal policy essentially commands that all Americans suffer involuntary exposure and property devaluation.
7. **Farm yields and cattle lifespan** threatened by wireless radiation[15]
8. **Fire and wildfire risks** from cell towers, which are electrical installations and have already caused disasters, including damage of $6 billion in one fire[16]
9. **Cybersecurity risks** are far greater with wireless networks, 5G being the least secure, as former FCC Chairman Tom Wheeler refers to "The 5G Cyber Paradox."[17]

**Solutions: we ask Congress to:**

- Restore liability for manufacturers to allow the free market to operate
- Restore states' rights to make decisions about their infrastructure
- Create safety limits and oversight to protect the public
- Ensure taxpayer broadband funding is spent only on futureproof wired broadband

**Wireless interferes with broadband policy goals**

**10. Waste of public funds:**
- 10.1. Fiber infrastructure's lifespan is fifty years (or more); wireless infrastructure's lifespan is only 5 years, making it a poor use of taxpayer subsidies.[18]
- 10.2. Billions of dollars in subsidies to wireless have not provided the promised ubiquitous service.[19]
- 10.3. Wireless and wired are not functionally equivalent technologies and therefore should not be treated on a "technology neutral" basis:[20] wireless suffers from line-of-sight obstructions, slower speed, inclement weather, and lack of scalability, whereas fiber is sustainable, renewable and futureproof.[21]

**11. Energy consumption** is far higher with wireless networks; 5G expected to increase energy consumption up to 61x between 2020 and 2030.[22]

**12. Wireless will perpetuate the digital divide, not solve it** [23]

[1] The limits were based largely on just a few animal studies with 11 monkeys and 12 rats, with no control group, in the 1970s and early 1980s.
International Commission on the Biological Effects of Electromagnetic Fields (ICBE-EMF), (2022). Scientific evidence invalidates health assumptions underlying the FCC and ICNIRP exposure limit determinations for radiofrequency radiation: implications for 5G. Environ Health. Oct 18;21(1):92
[2] See note 7 below, at footnote 31 of Environmental Health Trust testimony, 3/27/24.
[3] Exposure and Testing Requirements for Mobile Phones Should Be Reassessed. US GAO, 2012
https://www.gao.gov/products/gao-12-771
[4] https://ehtrust.org/environmental-health-trust-et-al-v-fcc-key-documents/
[5] Resolution Of Notice Of Inquiry, Docket 13-84, 12/4/19 https://www.fcc.gov/document/fcc-maintains-current-rf-exposure-safety-standards
[6] *Environmental Health Trust et al. v. FCC*, 2021, DC Circuit

- The D.C. Circuit Court of Appeals ruled against the FCC for its failure to provide a reasoned explanation under the Administrative Procedures Act to maintain its 1996 wireless exposure limits without addressing extensive evidence of harm. The docket contained 11,000 pages of scientific, peer-reviewed studies showing harm below the FCC limits, including accounts of injury. The court wrote that the FCC failed to respond to "record evidence that exposure to RF radiation at levels below the Commission's current limits may cause negative health effects unrelated to cancer."
- The Court ordered the FCC to address impacts on children, long-term exposure effects on health, and the environment. To date, the FCC has failed to comply with the court order. Therefore, its 1996 limits cannot be relied upon to protect the public.

https://www.cadc.uscourts.gov/internet/opinions.nsf/FB976465BF00F8BD85258730004EFDF7/$file/20-1025-1910111.pdf
[7] See testimony submitted by Environmental Health Trust to Senate Commerce Committee, 3/27/24, regarding spectrum policy and harms from radiofrequency radiation
https://ehtrust.org/wp-content/uploads/EHT-Testimony-to-Senate-Commerce-Committee-on-S3909-03272024.pdf
National Toxicology Program 2018: clear evidence of cancer (highest level of evidence)
https://ntp.niehs.nih.gov/whatwestudy/topics/cellphones#studies
Woman living near cell tower diagnosed with 51 strokes,
https://www.momsacrossamerica.com/woman_living_near_cell_tower
[8] See Reply Comments of Advocates for the EMS Disabled, FCC Docket 22-69
https://thenationalcall.org/wp-content/uploads/2023/09/FCC-Reply-Comments-EMS-Disabled-Docket-22-69-DEI-NPRM-4-20-23-FINAL.pdf
[9] If wireless were so safe and desirable, why does the federal government need to trample on local governments to force deployment? As an example of federal preemption mandating deployments, section 6409 of the 2012 Middle Class Tax Relief and Jobs Act (47 USC §1455), under which the majority of wireless facilities are deployed today, mandates that: "a State or local government may not deny, and shall approve, any eligible facilities request."
[10] The plain text of 47 USC §332(c)(7)(B)(iv) preempts zoning decisions on the placement of cell towers on the basis of environmental effects of radiofrequency emissions within FCC regulations. Courts have inappropriately expanded deference to FCC's limits resulting in shielding industry from tort liability, in effect creating a safe harbor for industry, while leaving the public exposed. For example, in *Cohen v. Apple* (2022, Ninth Circuit, No. 20-17307, petition for certiorari denied), the court wrote: "FCC's regulations…preempted state laws that imposed liability premised on levels of radiation below the limits set by the FCC." See amicus brief by Children's Health Defense (2023) https://www.supremecourt.gov/DocketPDF/22/22-698/263539/20230414130203673_22-698%20%20Amicus%20Brief.pdf
*Walker v. Motorola Mobility*, 2:21-CV-00923 (W.D. La. 2023). The court wrote (at 22): "state law claims attacking the safety of the SAR Standard are preempted by federal law. Though the **FCC disclaimed any expertise in health**

**or safety**, it set the SAR standard under a congressional mandate and in service of its broad statutory mandate to provide a uniform, efficient network." [Emphasis added] https://casetext.com/case/walker-v-motorola-mobility-llc
While companies are shielded from tort liability, at the same time the insurance industry does not insure these risks. Swiss Re calls 5G an "off the leash" insurance risk (see p.10-11). Telecoms warn shareholders of potential liability from health effect claims. Companies should compete on safety; some already recognize this. E.g., Swisscom patent to reduce wireless radiation because of the risk of cancer and neurological disorders, Int'l Pub'n No. WO 2004/075583 A1 2 Sept 2004 PCT, https://www.avaate.org/spip.php?article2061 and by cell phone manufacturers.

[11] *Murphy v. NCAA* US 2018, https://www.supremecourt.gov/opinions/17pdf/16-476_dbfi.pdf

[12] Cell towers inflict wireless pollution on private property, reducing the habitability of that property, without just compensation. See memorandum on constitutional considerations, section 1.c, for a discussion of Fifth Amendment case law
https://docs.google.com/document/d/1DBTtngzDuZ9Ibmze58gBXsJs1jXzU5dQZx0ycFQumUk/edit#heading=h.6cyqdt7korzl
Cell towers decrease property values: Wireless Towers and Home Values: An Alternative Valuation Approach Using a Spatial Econometric Analysis, 2017, https://link.springer.com/article/10.1007/s11146-017-9600-9

[13] https://www.emfanalysis.com/property-values-declining-cell-towers/?iframe=1&iframe=1&iframe=1

[14] *Nat'l Fed'n of Indep. Bus. v. Sebelius*, 567 U.S. 519, 553-54, 573-74 (2012).

[15] https://ehtrust.org/wireless-radiofrequency-radiation-effects-on-agriculture/
European Court shut down a cell tower for 20% reduction in cows' milk yield and the death of 40 cows.

[16] E.g., Woolsey Fire in CA 2018 caused $6 billion in damages, destroyed 100,000 acres, 295,000 people evacuated, [three deaths]
https://ehtrust.org/wp-content/uploads/wildfire-cell-tower-fact-sheet-EHT-2-11-24.pdf

[17] 5G, as a software based system, is easily hacked.
https://www.cyber.forum.yale.edu/blog/2021/7/20/cybersecurity-risk-in-5g?iframe=1
Tom Wheeler noted that the structure of 5G networks to provide for additional capability "also introduce[s] new security vulnerabilities." https://www.brookings.edu/articles/the-digital-future-requires-making-5g-secure/

[18] Tom Wheeler, former FCC chair and former CEO of CTIA, testified in 2021 that fiber is future proof with **wireless only as a last resort,** https://democrats-energycommerce.house.gov/sites/evo-subsites/democrats-energycommerce.house.gov/files/documents/Witness%20Testimony_Wheeler_FC_2021.03.22.pdf.
Fixed Wireless Technologies and Their Suitability for Broadband Delivery, June 2022
https://www.benton.org/publications/FixedWireless

[19] In testimony to the House Energy and Commerce Committee, 3/ 2221, former FCC Chair and former CTIA CEO Tom Wheeler spoke disappointingly that despite approximately $40 billion of government subsidies "over the last decade," those subsidies "have failed to deliver the goal of universal access to high-speed broadband … because it failed to insist on futureproof technology, … and focused more on the companies being subsidized than the technology being used or the people who were supposed to be served."
https://democrats-energycommerce.house.gov/sites/evo-subsites/democrats-energycommerce.house.gov/files/documents/Witness%20Testimony_Wheeler_FC_2021.03.22.pdf

[20] A principle of the Telecom Act of 1996 is nondiscrimination among functionally equivalent services. Correlatively, treating as the same services that are not functionally equivalent is discriminatory against services with superior service characteristics – in this case, discriminatory against wired broadband. For example, see 47 USC §160, §224(e)(1), §253(c), §332(c)(7)(B)(i)(I).

[21] https://www.benton.org/blog/how-fixed-wireless-technologies-compare-fiber

[22] https://ehtrust.org/science/reports-on-power-consumption-and-increasing-energy-use-of-wireless-systems-and-digital-ecosystem/

[23] House Energy & Commerce Committee, 1/29/20 testimony
https://docs.house.gov/meetings/IF/IF16/20200129/110416/HHRG-116-IF16-Wstate-SieferA-20200129.pdf
"House Energy & Commerce Committee, 9/21/23 witness, "Fiber is the most scalable, reliable, long-term, future proof strategy we have."
https://www.youtube.com/watch?v=ptQJ_wbtHYc&t=6029s